

Amendments to the Claims:

Without prejudice or disclaimer, please amend the claims as shown in the below Listing of Claims. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-22. (canceled)

23. (previously presented) A process for covalently binding a tagged protein to a polymer particle, the process comprising;
providing a tagged protein;
contacting the tagged protein with a conjugate of a chelating agent and a polymer particle
to form a protein-polymer particle-chelating agent metal ion complex; and
contacting the complex with a carbodiimide to form a covalently bound protein;
wherein:
the tag comprises at least two histidine residues;
the tag comprises at least two lysine residues;
the chelating agent is tridentate, tetradentate, or pentadentate;
the chelating agent comprises at least two carboxyl groups; and
the chelating agent is coordinated by a metal ion.

24. (previously presented) The process of claim 23, further comprising removing the metal ion from the covalently bound protein,

25. (previously presented) The process of claim 23, wherein the tagged protein is a HAT-tagged protein.

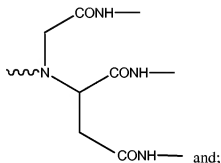
26. (previously presented) The process of claim 23, wherein the carbodiimide is dicyclohexylcarbodiimide, N-(3-dimethylaminopropyl)-N'-ethylcarbodiimide (EDC), or a salt thereof.
27. (previously presented) The process of claim 23, wherein the chelating agent comprises three carboxyl groups.
28. (previously presented) The process of claim 23, wherein the chelating agent is tetradentate.
29. (currently amended) The process of claim 23, wherein the chelating agent is iminodiacetic acid, nitrilo triacetic acid, ~~tris(carboxymethylethylene~~
tris(carboxymethyl)ethylene diamine or carboxymethylated aspartate (Cm-Asp).
30. (previously presented) The process of claim 23, wherein the polymer particle is magnetic.
31. (previously presented) The process of claim 23, wherein the polymer particle is porous.
32. (previously presented) The process of claim 23, wherein the polymer particle has a diameter of about 0.2 microns to about 1.5 microns.
33. (previously presented) The process of claim 23, wherein the metal ion is a transition metal ion.
34. (previously presented) The process of claim 23, wherein the metal ion has a 2+ oxidation state.
34. (previously presented) The process of claim. 23, wherein the metal ion is Co²⁺.

35. (previously presented) A covalently bound protein obtained by the process of claim 23.

36. (previously presented) A protein bound to a polymer particle having the structure:

Polymer particle - linker - protein; wherein:

the linker comprises the structure:



the protein comprises a tag sequence comprising at least two histidine residues and at least two lysine residues.

37. (previously presented) A protein covalently bound to a magnetic polymer particle, wherein:

the protein comprises a tag sequence;

the tag sequence comprises at least two histidine residues and at least two lysine residues; the magnetic polymer particle comprises a linking group; and

the linking group is covalently bound to at least one of the at least two lysine residues via amide linkages.

38. (previously presented) A plurality of particles of claim 37, wherein the plurality of particles are monodisperse.